

TM 11-5135-15  
\* C 3

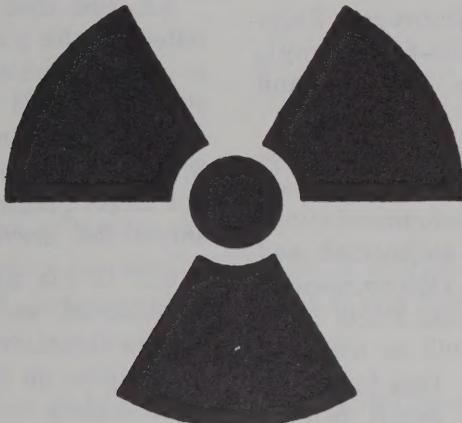
## RADIO SET CONTROL AN/GSA-7

CHANGE }  
No. 3 }HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 24 October 1963

TM 11-5135-15, 7 May 1958, is changed as follows:

*Inside front cover.* Delete the "RADIATION HAZARD" notice and substitute:

## RADIATION HAZARDS



STD-RW-2

Ni 63  
Co 60

Tube types OB2WA and 5651 used in the AN/GSA-7 contain radioactive material. These tubes are potentially hazardous when broken; see qualified medical personnel and the Safety Director if you are exposed to or cut by broken tubes. Use extreme care when replacing these tubes (par. 20c) and follow safety procedures in their storage and disposal (par. 20.1).

Never place a radioactive tube in your pocket.

Use extreme care not to break radioactive tubes while handling them.

Never remove radioactive tubes from cartons until ready to use them.

Refer to paragraph 20.1 on handling, storage, and disposal of radioactive material.

*Page 3, paragraph 1.* Delete subparagraphs b and c and substitute:

b. The maintenance allocation chart (MAC) appears in TM 11-5820-274-12P.

Add paragraph 1.1 after paragraph 1.

## I.I. Index of Publications

Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment. DA Pam 310-4 is an index

\* This change supersedes C 2, 14 January 1963.

of current technical manuals, technical bulletins, supply bulletins, lubrication orders, and modification work orders that are available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc.) and the latest changes to and revisions of each equipment publication.

Delete paragraph 2 and substitute:

## 2. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions in TM 38-750.

b. *Report of Damaged or Improper Shipment.* Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSANDA Publication 378 (Navy), and AFR 71-4 (Air Force).

c. *Reporting of Equipment Manual Improvements.* The direct reporting by the individual user of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to: Commanding Officer, U. S. Army Electronics Materiel Support Agency, ATTN: SELMS-MP, Fort Monmouth, N.J. 07703. One information copy will be furnished to the individual's immediate supervisor (officer, noncommissioned officer, supervisor, etc.).

*Page 4, paragraph 4b. (as changed by C 2, 14 Jan 63). Add subparagraph b.1 after subparagraph b.*

b.1. When Receiver-Transmitter, Radio RT-246/VRC or Receiver-Transmitter, Radio RT-524/VRC is used to call the telephone equipment, an external ring facility must be used to generate the 1,600-cps ring signal.

*Page 6, paragraph 5. Add the following to the technical characteristics chart:*

*Warning:* Tube types OB2WA and 5651 are used in this equipment. These tubes contain

radioactive material and are potentially hazardous when broken. The type and quantity of radioactivity are listed below.

Tube type	Isotope	Quantity (microcuries)
OB2WA	Ni 63 or Co 60	0.01-05 0.0067
5651	Co 60	0.0067

*Page 10, paragraph 10. Delete subparagraph a and substitute:*

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (par. 2).

a.1. See that the equipment is complete as listed on the packing slip. If the packing slip is not available, check the equipment against section II, TM 11-5820-274-12P. Report all discrepancies in accordance with TM 38-750. Shortage of a minor assembly or part that does not affect proper functioning of the equipment should not prevent use of the equipment.

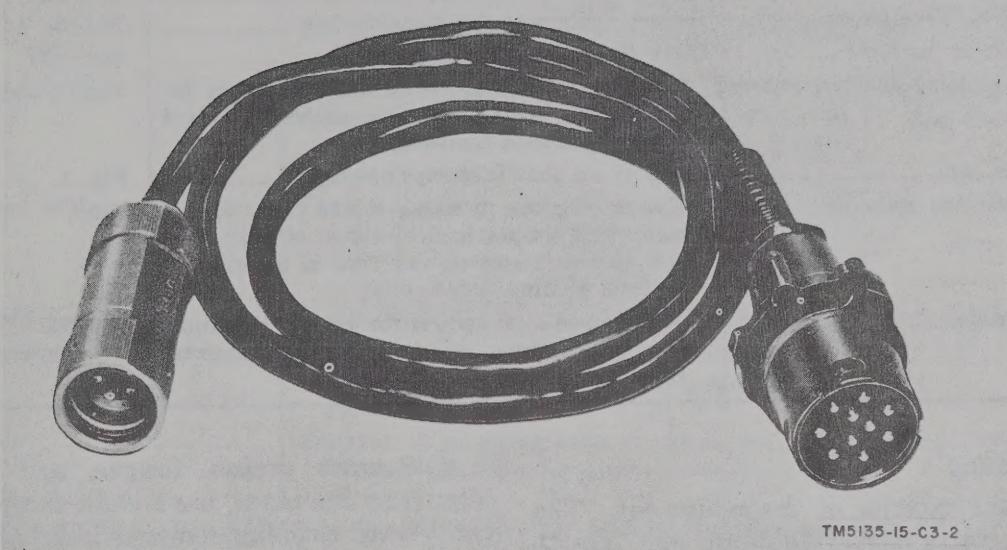
a.2. If the equipment has been used or reconditioned, see whether it has been modified, the modification work order (MWO) number will appear on the front panel near the nomenclature plate. Check to see whether the MWO number (if any) and appropriate notations concerning the modification have been entered in the equipment manual.

*Note. Current MWO's applicable to the equipment are listed in DA Pam 310-4.*

*Page 12, paragraph 11h (as changed by C 2, 14 Jan 63). Add subparagraph h.1 after subparagraph h.*

h.1. To transmit and receive through Receiver-Transmitter, Radio RT-246/VRC or Receiver-Transmitter, Radio RT-524/VRC, Cable Assembly, Special Purpose, Electrical CX-7474/U (figs. 6.1 and 23.1) is used to adapt RADIO receptacle J3 or J4 on the AN/GSA-7 to the RETRANSMIT R/W connector on the RT-246/VRC or RT-524/VRC.

*Add figure 6.1 (as added by C 2, 14 Jan 63) after figure 6.*



TM5135-15-C3-2

Figure 6.1. Cable, Assembly, Special Purpose, Electrical CX-7474/U.

Page 16, chapter 3. Make the following changes:

Heading. Change the heading to: MAINTENANCE INSTRUCTIONS.

Section I. Delete section I, including figure 8 and 9, and substitute:

## Section I. OPERATOR'S MAINTENANCE

### 14. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. *Systematic Care.* The procedures given in paragraphs 15 through 16.1 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

b. *Preventive Maintenance Checks and Services.* The preventive maintenance checks and services chart (par. 16) outlines functions to be performed at specific intervals. These checks and services are to maintain Army electronic equipment in a combat serviceable condition; that is, in good general (physical) condition and in good operating condition. To assist operators in maintaining combat serviceability, the chart indicates what to check, how to check, and what the normal conditions are.

The references column lists the illustrations, paragraphs, or manuals that contain supplementary information. If the defect cannot be remedied by the operator, higher echelon maintenance or repair is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in TM 38-750.

### 15. Preventive Maintenance Checks and Services Periods

Preventive maintenance checks and services of the AN/GSA-7 are required daily. Paragraph 16 specifies the checks and services that must be accomplished daily and under special conditions listed below.

- a. When the equipment is initially installed.
- b. When the equipment is reinstalled after removal for any reason.
- c. At least once each week if the equipment is maintained in a *standby* condition.

## 16. Daily Preventive Maintenance Checks and Services Chart

Sequence No.	Item	Procedure	References
1	End item equipment-----	Inspect equipment for completeness-----	Par. 6
2	Exterior surfaces-----	Clean the radio set control case-----	Par. 16.1.
3	Intercabling and connectors	Check interconnecting cables and connectors for cracks and breaks. Replace cables that have cracks or broken connectors.	Figs. 1 and 6.1.
4	Fuse caps-----	Check to see that fuse caps are tight-----	Fig. 7.
5	Knobs and switches-----	While making the operating checks (item 6), observe that the mechanical action of each knob and switch is smooth and free of external or internal binding.	None.
6	Operation -----	Check the radio set control for normal operation. During operation, be alert for any unusual signs or conditions.	Par. 13.

### 16.1. Cleaning

Inspect the exterior of the equipment. The exterior surfaces should be clean, and free of dust, dirt, grease, and fungus.

a. Remove dust and loose dirt with a clean soft cloth.

*Warning:* Cleaning compound is flammable and its fumes are toxic. Provide adequate ventilation. *Do not* use near a flame.

b. Remove grease, fungus, and ground-in dirt from the cases; use a cloth dampened (not wet) with cleaning compound.

c. Remove dust or dirt from plugs and jacks with a brush.

d. Clean the front panel and control knobs; use a soft clean cloth. If dirt is difficult to remove, dampen the cloth with water; mild soap may be used for more effective cleaning.

## Section I.I ORGANIZATIONAL MAINTENANCE

### 16.2. Tools, Materials, and Test Equipment Required

A list of parts authorized for organizational maintenance appears in TM 11-5820-274-12P. The tools, materials, and test equipment required for organizational maintenance are listed below.

a. *Tools.* All the tools required are contained in Tool Kit, Radio Repair TK-115/U.

b. *Materials.*

(1) Cleaning compound (Federal stock No. 7930-395-9542).

(2) Cleaning cloth.

c. *Test Equipment.*

(1) Multimeter AN/URM-105.

(2) Test Set, Electron Tube TV-7/U.

bility of all echelons concerned with the equipment and includes the inspection, testing, and repair or replacement of parts, subassemblies, or units that inspection and tests indicate would probably fail before the next scheduled periodic service. Preventive maintenance checks and services of the equipment at the second echelon level are made at quarterly intervals unless otherwise directed by the commanding officer. The preventive maintenance checks and services should be scheduled concurrently with the periodic service schedule of the carrying vehicle for all vehicular installations.

b. Maintenance forms and records to be used and maintained on this equipment are specified in TM 38-750.

### 16.3. Organizational Preventive Maintenance

a. Preventive maintenance is the responsi-

## 16.4. Quarterly Preventive Maintenance Checks and Services Chart

Sequence No.	Item	Procedure	References
1	Publications -----	See that all publications are complete, serviceable, and current.	DA Pam 310-4.
2	Modifications -----	Check to determine if applicable MWO's have been published. All URGENT MWO's must be applied immediately. All NORMAL MWO's must be scheduled.	TM 38-750 and DA Pam 310-4.
3	Spare parts -----	Check all running parts for general condition and method of storage. There should be no evidence of overstock, and all shortages must be on valid requisitions.	TM 11-5820-274-12P.
4	Installation -----	See that equipment is properly installed-----	Par. 11.
5	Preservation -----	Check all surfaces for evidence of fungus. Remove rust and corrosion and spot-paint bare spots.	Par. 16.4.
6	Fuses -----	See that all operating fuses are of correct value. Check spare fuses for proper value and quantity.	Fig. 7 and par. 6b.
7	Mounting -----	See that all bolts, nuts, washers, and mounting latches are correctly positioned and properly tightened. Check for cracked, bent, or broken brackets.	Fig. 6.
8	Gasket -----	Check front panel gasket for moisture, oil, saturation, and brittle, broken, cracked, loose, pinched, or mismatch.	None.
9	Pluckout items -----	Swing chassis open and inspect clamps and seating of pluckout items. Check for wrong, bent, or broken parts.	Fig. 4.
10	Knobs and switches-----	While making the operating checks (item 11), observe that the mechanical action of each knob and switch is smooth and free of external or internal binding.	Par. 19.
11	Operating -----	Check the operation of the radio set control in accordance with the operation checklist.	Par. 19.

## 16.5. Touchup Painting Instructions

Remove rust and corrosion from metal surfaces by lightly sanding them with fine sandpaper. Brush two thin coats of paint on the bare metal to protect it from further corrosion. Refer to the applicable cleaning and refinishing practices specified in TM 9-213.

*Page 20, paragraph 20. Add paragraph 20.1 after paragraph 20.*

### 20.1. Handling, Storage, and Disposal of Radioactive Material

Follow the procedures for safe handling,

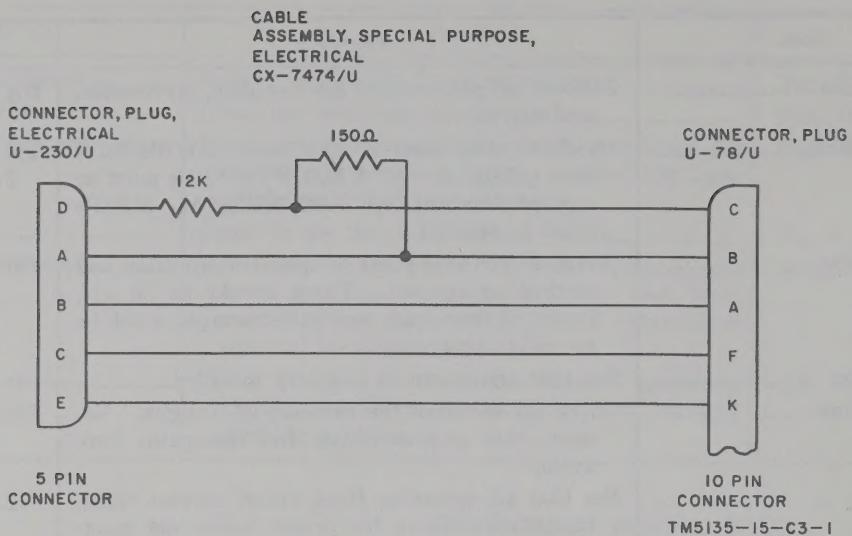
storage, and disposal of radioactive materials as directed by—

a. TB SIG 225, Identification and Handling of Radioactive Signal Items.

b. AR 40-580, Medical Service, Control of Hazards Health from Radioactive Materials.

c. AR 755-380, Disposal of Supplies and Equipment, Disposal of Unwanted Radioactive Material.

*Page 38, figure 23.1 (as added by C 2, 14 Jan 63) Add figure 23.1 after figure 23.*



*Figure 23.1. Cable assembly, special purpose, electrical CX-7474/U, wiring diagram.*

*Page 43, appendix I. Change the heading to: APPENDIX. Add the following:*

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 4, 6, 7, 8, and 9), Supply Bulletins, Lubrication Orders, and Modification Work Orders.
TM 9-213	Painting Instructions for Field Use.
TM 11-5820-274-12P	Operator's and Organizational Maintenance Repair Parts and Special Tools Lists and Maintenance Allocation Chart: Control, Radio Set AN/GSA-7.
TM 11-5820-274-35P	Field and Depot Maintenance Repair Parts and Special Tools List: Control, Radio Set AN/GSA-7.
TM 11-5820-401-10	Operator's Manual: Radio Sets AN/VRC-12 and AN/VRC-43, -44, -45, -46, -47, -48, and -49.
TM 11-5820-401-20	Organizational Maintenance Manual: Radio Sets AN/VRC-12 and AN/VRC-43, -44, -45, -46, -47, -48, and -49.
TM 11-6625-203-12	Operator and Organizational Maintenance: Multimeter AN/URM-105, Including Multimeter ME-77/U.
TM 11-6625-274-12	Operator's and Organizational Maintenance Manual: Test Sets, Electron Tube TV-7/U, TV-7A/U, TV-7B/U and TV-7D/U.
TM 38-750	The Army Equipment Record System and Procedures.

*Page 45. Delete appendix II.*

By Order of the Secretary of the Army:

EARLE G. WHEELER,  
General, United States Army,  
Chief of Staff.

Official:

J. C. LAMBERT,  
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*The Adjutant General.*

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U.S. GOVERNMENT PRINTING OFFICE: 1970-397-111/556  
808-690

